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METEOROLOGY IN GERMAN SECONDARY SCHOOLS

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The paper which is presented below continues the investigation presented in this journal in the articles "Meteorology in the Physics and Geography Textbooks for Secondary Schools" (5, 59, 107, 1952 and 7, 3, 1954) and "Curricula for Secondary Schools" (7, 186, 1954). It was found desirable to examine new textbooks and also to investigate the degree to which teacher's magazines carry articles on newly-established knowledge.

1. A Survey of Periodical Publications

The journals in question are Der Mathematische und Naturwissenschaftliche Unterricht (M. N. U.) [The Teaching of Mathematics and the Natural Sciences], the organ of the German Society for the Advancement of the Teaching of Mathematics and the Natural Sciences (1-5); the 2 scholastic journals in the field of physics, Praktische Schulphysik [Practical Physics for the Schools] (6-9, 59) and Praxis der Physik, Chemie und Photographie [Physics, Chemistry and Photography in Practice] (10-12); and the publication of the Society of German Geography Teachers Die Geographische Rundschau [Geographical Review] (39-46). We shall also discuss articles in Umschau in Wissenschaft und Technik [Scientific and Technological Survey], a publication of particular importance to teachers, as it reports consistently on all new findings of moment (13-21, 63-65). This journal has also attained special significance for us in that it is offered to students and school children at a reduced price, permitting it to be ordered for secondary school students. In addition to the foregoing, we have surveyed Naturwissenschaftliche Rundschau (Natural Science Review), as it is of special interest to biology teachers in particular (22-38, 55-57). It may be recorded here, with satisfaction, that both these publications have given attention to problems of meteorology. The teacher of the natural sciences would do very well to glance through them, as virtually every issue presents valuable suggestions for education. The teachers' journals reveal that the secondary school teacher is primarily interested in the fields of contact between the various sciences, making it possible for him to demonstrate the connection between these sciences. This is also demonstrated by the program of the 1956 Easter meeting of the German Society for the Advancement of the Teaching of Mathematics and Natural Sciences. Here, for the first time, lectures were given on the handling of specific subjects. For physics these were:

1. The newer physics in the secondary school (suitable experiments arranged for teaching).
2. Preparatory physics in the lower forms.
3. Test problems in physics.

For biology there were:

1. The role of experiments in the teaching of biology.
2. Experiences in the free provincial schools (school gardens, provincial children's institutions).

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3. Methods of treating disciplines bordering on psychology and philosophy.

Meteorology was presented at the last 2 meetings of the Society in lectures by professor doctor W. Gerlach of Munich (1), and professor doctor R. Muegge of Frankfurt-on-Main (5), respectively, while doctor H. Voigts spoke on the subject at the annual meeting of the Society of German Teachers of Geography (42). No paper on meteorology was read in Hannover at the 1956 Easter meeting of the Society for the Advancement.

The teacher of the natural sciences in higher schools should find that his meetings and publications help him as follows:

(a) on new fundamental research, particularly as applied in physics, biology (agriculture included), and geography. They represent points of contact between the individual disciplines.

(b) the secondary-school teacher should also be stimulated to improve the practical performance of his work and the organization of his lessons. It should be remembered that the time available at these meetings is very limited, and that there must be no repetition of that which is common knowledge.

2. New Curricula for the Teaching of the Natural Sciences

The foregoing brings us to a consideration of curricula. The last large conference of the Ministry of Culture has led to efforts to unify the system of secondary schools, and has resulted in adoption of the uniform designation "Gymnasium" for all secondary schools. In addition, there have been discussions of curricula among the teachers of various subjects in the provinces, which have produced a high degree of uniformity in the examinations given in geography, for example. These conferences resulted, among other things, in the publication of curricula. I have before me the new outline of curriculum for Schleswig-Holstein (54). It provides -- and the title "Guiding Principles" is therefore accurate -- no binding instructions, but rather that which should be done in general. Meteorology is covered as follows in the physics curriculum of the first half of the third form: fundamentals of weather study, including plotting and reading weather maps, isobars, high and low pressure areas, and problems in air temperature, wind direction, wind velocity, clouds, and precipitation. In geography, foundations for the study of meteorology are provided in the sixth form: observations of the heavens (cloud forms); while the fifth and fourth forms provide for weather observations with calculation of monthly and annual averages. The work is completed in the second half of the second form with the teacher choosing from among the following aspects of general physical geography: climate factors, climates, weather, weather forecasting, relationship of vegetal cover to climate and soil, and oceanography. Detailed study of climate and meteorology, and of oceanography, is compulsory. Choice of the other subjects, and of degree of detailedness of treatment, is up to the teacher. The climax of the course is the treatment of a landscape zone. Introductory study of weather maps and navigation charts is compulsory.

3. Physics Textbooks for the Secondary Schools

1. Hoefling, Lehrbuch der Physik [Physics Textbook], meteorology and astronomy. Special edition for the intermediate forms. Version A, 1954, Bonn, Verlag Duenmiller.

Hoefling, Lehrbuch der Physik. [Physics Textbook], Version B, for the upper forms (terminology adjusted to upper schools and girls' upper schools), 1955. Similar to Edition A, but aimed at gymnasiums specializing in natural

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sciences, Senior Engineering High Schools, and all other schools with intensified courses in physics. Second edition, 1956, Bonn on the Rhine, Duemmlers Verlag.

2. Fock-Weber, Lehrbuch der Physik fuer hoehere Lehranstalten, [Physics Textbook for the Secondary Schools], Vol 1, for the lower forms, with the collaboration of F. Bergmann, K. Kolde, and W. Moeller; revised by E. Fock. Second edition, 1954, Hamburg-Pinneberg-Frankfurt-on-Main, G. Salles Verlag, 1954. Vol 2, for the upper forms, with the collaboration of F. Bergmann, K. Kolde, and W. Moeller, revised by E. Fock, 1953.

3. Poske-Bavink, Lehrbuch der Physik [Physics Textbook], Vol I, revised by Erich C. Mueller, twenty-first revised edition, 1955. Vol II revised by R. Brenneke. Eleventh edition, 1954, Friedrich Vieweg and Son, Brunswick.

4. E. Baumann, Lehrbuch der Physik fuer Schulen mit einzuegigem Physikunterricht [Physics Textbook for Schools in which Physics is Taught from the Outset], Part 2, Optics and Electricity, Munich, Ehrenwirth Verlag, in press.

G. Heussel, Physik [Physics], for the higher forms (to appear in the spring of 1956), Munich, K. Oldenbourg.

New printings, representing partial revisions, of the Fock-Weber and Poske-Bavink textbooks, are now under way.

The Hoeffling physics textbook for the higher forms and a special reprint on meteorology and astronomy from the volume for the middle forms, are new works. The volumes of E. Baumann's Lehrbuch der Physik and G. Heussel's Physik will appear early in 1956.

Our table shows the scope of treatment of meteorology in the various texts. For that reason, we shall confine ourselves here to general remarks.

[See Table 1, following page]

The Fock-Weber presents a very clear methodological structure throughout, and is easily read by school children. The portion for the lower forms gives meteorology its full due. The volume for the upper forms adduces valuable supplementary data under the heading of aerodynamics and in the field of atmospheric electricity and optics.

Poske-Bavink. Its treatment for the upper forms (see Meteorolog. Rundschau [Meteorological Review] 7, Page 105) constitutes a model presentation of meteorology, and the volume for the intermediate forms is deserving of the same description. Taking the 2 together, the results are particularly pleasing, especially as a large proportion of the textbooks for the upper forms lack any special treatment of meteorology.

A special reprint of the meteorological and astronomical portions of Version A of G. Hoeffling's Lehrbuch der Physik, designed for gymnasiums specializing in the natural sciences, has been published. This is a very satisfying event, as it indicates that a number of schools, using textbooks with an inadequate treatment of meteorology, have been seeking supplementary material in this field, independent of particular form levels. The volume for the upper forms provides little additional data. It was clearly the publisher's intention that the special reprint on meteorology be used in conjunction with this volume as well. Hoeffling's textbook by itself is one of the most valuable new additions to the textbook literature on physics.

TABLE 1

METEOROLOGY IN SECONDARY-SCHOOL PHYSICS TEXTBOOKS

Intermediate forms	Mechanics	Number of pages	Thermo- dynamics or special branch	Illustra- tions	Number of pages	Electricity	Number of pages	Optics	Number of pages	Reproduction of weather maps	Total number of pages
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Fock-Weber, <u>Lehrbuch der Physik</u> , Vol 1 for lower forms, second edition	Air pressure; magnitude of air pressure; measurement of altitude; barometer.	4 1/2	Thermometers; maximum and minimum ther- mometers; thermograph; ocean climates; land winds and ocean winds; aerology: structure of the atmosphere, air pressure, temperature, humidity, clouds and precipitation; the wind; weather maps: highs and lows; origin of warm and cold air masses; fronts. Air masses; cli- mate zones. Historical.	19, with 2 pages of cloud tables	21 2/3	-	-	Rainbows (primary and sec- ondary)	1	Good repro- duc- tion and legend. 2 good weather maps.	27 1/6

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[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
Poske-Bavink-Mueller, <u>Physik</u> [Physics], Vol I, for intermediate forms of secondary schools and higher forms of Realschulen and lower-level secondary schools, twenty-first edition, 1955	Air pressure and its measurement; decline therein as altitude increases; the terrestrial atmosphere; eddy formations (air eddies); wings; up-drafts and their importance in gliding	4 1/4 1 2	Physical bases for meteorology: stratus clouds, precipitation. Weather observation instruments. Weather maps and prediction.	6	6 1/2	Lightning and lightning protection	1 1/2	-	-	Good weather maps	17 1/4
Upper forms											
Poske-Bavink, <u>Lehrbuch der Physik</u> , Vol II, upper classes, eleventh edition, 1954.	Detailed review in <u>Meteor. Rdsch.</u> , 1954, 7, 105	12		17	24		1 1/2	-	1/2	-	38
O. Hoefling, <u>Lehrbuch der Physik</u> , upper forms, Version B for Gymnasiums and girls' schools, specialising in language, 1955.		-	-	-	-	Lightning; St. Elmo's fire	1	Ultra-violet and infrared rays	2	-	3

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[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]
E. Baumann, <u>Lehrbuch der</u> <u>Physik fuer</u> <u>Schulen mit</u> <u>einsuegigen</u> <u>Physikunterricht</u> (Physics Text- book for Schools in which Physics is Taught from the Outset), Vol 2, Optics and Electricity, 1956, Ehrenwirth, Munich		7		11	10 1/2	Electrical fields in the at- mosphere (range of potential); thunder- storms; lightning rods; aurora borealis, with 3 illus- trations, treated under gas discharge	1 1/2	Optical phenomena in the atmosphere: dawn, re- fraction, scintilla- tion, mirages, haloes, rainbows, 5 figures and 2-color tables (rainbow and haloes)	3		23 pages in Vols 1 and 2. Vol 3 will contain certain addi- tional data on meteor- ology under the heading of waves

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In our previous article (Meteorologische Rundschau) (7, 10a ff.), E. Baumann's textbook was characterized as a new and very interesting experiment in the methodology of physics courses in schools in which physics is taught from the outset. We said that this book gives scrupulous attention to the applications of physics and to meteorology. The subsequent volumes supplement the earlier treatment by correspondingly-detailed sections on atmospheric optics and electricity. Particularly noteworthy is the good reproduction of illustrations, including an instructive color picture of the rainbow and a good halo photograph.

Finally, be it noted that the volumes for upper forms of Heussel's textbook, discussed in detail in our previous paper, have also been published in 1956. The publishers inform us that they have gone to great pains to treat meteorology as accurately in these volumes as in the portion for the lower forms. This textbook is distinguished by a number of original approaches in method, and is valuable in this respect.

4. Geography Textbooks for Secondary Schools

1. E. Hinrichs, Erdkunde fuer hoehere Schulen [Geography for Secondary Schools], Vol VI, "The Earth," revised by professor doctor E. Hinrichs with contributions by doctor H. Voigts. Seventh edition, 1956, M. Diesterweg, Frankfurt-on-Main (in press).

2. Laender und Voelker [Lands and Peoples], Vol III (1): Afrika [Africa], revised by K. Heck, secondary-school principal, third edition, 1955, Volume VI: Landschaftsguertel der Erde und allgemeine Geographie [Landscape Zones of the Earth and General Geography], revised by G. Schneider, second edition, 1955, Stuttgart, Ernst Klett.

3. Mann, Hans, a collection of geography workbooks Von Himmel und Erde. Allgemeine Erd-, Himmels- und Wetterkunde [Of Heaven and Earth: General Geography, Astronomy and Meteorology], revised by Hans Mann. Fifth improved edition (eighty-fifth to ninety-sixth thousand), 1955. F. Duemmler, Bonn on the Rhine.

There are no new textbooks, but new editions are available of E. Hinrichs' Erdkunde fuer hoehere Schulen, Vol VI, and of Laender und Voelker, Vol III (1), Afrika, and Vol VI, Landschaftsguertel der Erde und allgemeine Geographie.

Hinrichs' Vol VI, which presents one of the most extensive treatments of meteorology in the portion for the second half of the second form, appeared after its revision (fifth edition, 1954) in its sixth edition in 1955, and its seventh is to follow in 1956. It may be concluded that geography teachers have found merit in the book. The publishing house, Klett, is introducing significant improvements both as to content and method, particularly in the revision of Vol VI, (Landschaftsguertel). This work, too, is distinguished by a satisfying treatment of the meteorological foundations of climatology. The difference in methodology in the treatment of the upper half of the second form in the 2 books is as follows: Hinrichs presents a coherent treatment of meteorology before going into landscape zones, while Laender und Voelker treats it as part of the various landscape zones.

Finally, a word on the collection of geography workbooks published by F. Duemmler. The volume on general geography, astronomy, and meteorology is the one that is of interest to us. This collection, designed to be useful in all types of schools, provides many methodological aids in the form of simple and instructive sketches, which thus give it high visual value. The large printing (eighty-fifth to ninety-sixth thousand) testifies to the popularity of the collection and of the volume before us.

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5. Methodological Publications, Maps, Teaching Aids

The publishing house of Klett in Stuttgart is also offering the first volume of a series of publications which offer the geography teacher supplements to the contents of his textbooks, and methodological aids: H. Voigts' Aus der Praxis des wetterkundlichen und klimatologischen Unterrichts [Experiences in the Teaching of Meteorology and Climatology], (52). This book supplements the author's book, Wetter, Klima, Leben [Weather, Climate, and Life] (51), previously reviewed in this magazine, which emphasizes both the fundamentals and their applications in microclimatology and biometeorology. The new publication presents the development, by inductive reasoning, of a study of meteorology within the framework of geography, beginning with the weather observations of pupils of the sixth form and proceeding to the problems of total atmospheric circulation, which will be of particular interest to teachers of geography. The material presented is naturally considerably greater than can be handled within the scope of geography. Also available in this connection are the following books, which have been reviewed in Meteorologische Rundschau: A. Buedel's Wetterkunde leicht gemacht [Meteorology Made Easy] (47); H. Panzram's Wir plaudern uns durch das Wetter [Let's Chat About the Weather] (49); Part 3 of P. Raethjen's Kurzer Abriss der Meteorologie, dynamisch gesehen [A Short Sketch of Meteorology, Viewed Dynamically] (48); and the cosmos pamphlet by A. Hofmann (50), all of which serve the teacher as methodological aids. We must also mention a very useful classroom wall map issued by Rudolf Westermann, Die Klimate der Erde [The Climates of the Earth]. The representation of the areal coverage of the major climate zones is in very close agreement with that set forth in the Koeppen-Geiger Handbuch der Klimatologie [Manual of Climatology], although Koeppen's symbols are not used in the map. Changes have been made on the basis of the Brockmann-Jerosch vegetation map, and, for Africa, on that of the Diels-Mildbread vegetation map (53).

No new aids in the teaching of meteorology have been offered. The well-known publications of the Main Office of the German Weather Service are the basis upon which the work by H. Voigt, previously referred to, has been built (52). The newspaper weather map is of particular importance, in addition to the daily weather maps of the Main Office. In this book I used as my model the maps issued by the maritime weather office in Hamburg, as they meet the requirements of school use. Unfortunately, not all the newspaper weather maps issued during the past 10 years meet these requirements. Simplifications which omit high and low-pressure areas and the main weather fronts, may be desirable for various purposes, but they do not meet the needs of the schools. While publication of a weather-prediction map is useful to agriculture, the standard type of map is better for school purposes.

6. Cooperation of Local Meteorologists and of the Meteorological Societies in the Advancement of Education in this Field

What we have stated above indicates how important is the cooperation of the German Weather Service and the local meteorologist. The meteorological societies can also help. On his request, I submitted to doctor M. Rodewald, chairman of the Hamburg Meteorological Society, an outline to serve as basis for discussion. Here I can only emphasize once again the importance of the work of the provincial and local meteorologists. The knowledge already obtained from them indicates that there is a great deal to be gained thereby. The new guiding principles for the curriculum in Schleswig-Holstein show that it is possible to provide a reasonable treatment of meteorology, despite the very difficult position of education, and the general overloading of subject matter. What the teacher does with the curriculum is his affair, and much must be left to the discretion of the school. It is worth while to the teacher to interest himself in this, particularly the directing bodies, heads of teachers' colleges, authors of textbooks, and, last but not least, the

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individual teacher himself. This is the proper concern of the local and provincial meteorologist. I cannot but appreciate the fact that the changes in the organization of the German Weather Service proposed by the Federal Accounting Department may cause very great trouble in this respect. Appreciation of the work of the Federal Weather Service stands and falls with the work of the local meteorologists. As head of the meteorological platoon in Travemuende during the war, I had ample opportunity to observe how much interest there was in our work on the part of business and the schools. This is something that can be met only by the local meteorologist, who is known to people as an individual, and not by the overloaded Main Office. The existing situation (which, in Schleswig-Holstein, for instance, was absolutely in accord with the desires of the responsible provincial ministry), should therefore be maintained. As meteorologists, we have no choice but to push this viewpoint with utmost vigor, unless we wish to commit suicide. These general remarks will suffice here, as there is no need for me to go into detail. The situation is familiar to every meteorologist active in everyday life.

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DECREE ON BULGARIAN FRONTIER ZONES

Izvestiya na Prezidiuma
na Narodnoto Subranie
[News of the Presidium
of the People's Assembly]
Vol VII, No 60, 27 July 1956,
Sofia, Pages 1-2

The Bulgarian Ministry
of the Interior

COUNCIL OF MINISTERS

Decree of the Council of Ministers of 9 July 1956, establishing border strips and zones along the state frontiers of the Bulgarian People's Republic.

For the Ministry of the Interior

The Council of Ministers decrees

1. The establishment of border strips and zones along the state frontiers of the Bulgarian People's Republic as follows.

(a) A restricted border strip 10 to 300 m wide along the Bulgarian-Yugoslav, Bulgarian-Greek, and Bulgarian-Turkish state frontiers, and from 10 to 20 m wide along the Bulgarian-Rumanian Dobruja land border.

(b) A 2-km border strip along the common frontiers with Greece and Turkey.

(c) A border zone up to 15 km wide along the common frontiers with Greece and Turkey.

(d) No strips or zones are established for the Black Sea and Danube state frontiers.

The width of the strips and the zones are to be determined from the line described as the state frontiers, and in the case of river borders, from the line of the bank, the islands of these rivers being included in the forbidden border strip.

The exact delineation of the strips and zones are to be determined by the Minister of the Interior, and their indication by signs (indicators) is to be carried out by the chairmen of the local people's soviets.

2. The restricted border strip is placed under the full authority of the Ministry of the Interior; agricultural and other activities can be carried out in it only with the permission of the Ministry of the Interior.

3. The permanent residents of the 2-km border strip must have upon their identification passports the special stamp no 1, while those of the border zone, the stamp no 2, placed by the Ministry of the Interior at their places of residence.

4. Individuals having stamp no 1 on their passports are entitled to circulate freely within the 2-km border strip within the limits of their okoliya, and in the border zone within the limits of their okrug, while individuals having on their passport stamp no 2 can circulate in the border

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zone only within the confines of their okrug. In order to enter in the 2-km border strip they must be supplied with the required pass.

Individuals not resident in the border zone, but having land in the same, those of the border zone having lands in the 2-km border strip, and also those among the inhabitants of the 2-km border strip and border zone having lands in the same in their neighboring okoliyas or okruga and who are connected with some agricultural or other work, can visit them only when bearing their identification passports, in accordance with the procedure established by the Ministry of the Interior.

Inhabitants of the border zone may visit the okoliya center or village People's soviet to which they belong administratively, only when carrying their identification passports, ~~and~~ the okoliya center or village People's soviet is located in the 2-km border strip, and for inhabitants of settlements outside the border zone, if the okoliya center or the village People's soviet is included in the same.

5. The entry into and stay within the 2-km border strip and the border zone by individuals who are not permanent residents of the same are permitted to holders of a pass.

Passes are issued by the Ministry of the Interior at the place of residence of the citizens, for a period of one month. Exceptionally, the same can be issued at the place of work of the individuals desiring passes. For justifiable reasons, the validity of passes can be extended to 3 months.

Individuals entering the 2-km border strip and the border zone on passes must, on arrival at the point mentioned in the passes, and again on departure, have the same checked at the nearest organ of the Ministry of the Interior. In settlements in which there are no such organs, the checking of the passes is to be done by the chairmen of the local People's soviets.

Individuals, the nature of whose work requires repeated visits to the 2-km border strip and border zone, must have their passes checked only during their first trip, and once again before the validity of the same has expired.

All nonresident citizens of the 2-km border strip or the border zone, and settling in the same for permanent or seasonal work will be issued a certificate by the respective offices (enterprises), bearing stamp no 1 or no 2, issued by the respective okoliya administrations of the Ministry of the Interior.

The directors of enterprises and offices located within the 2-km border strip and border zone are forbidden to accept for work individuals not having a passport (or certificate) bearing stamp ~~no 1~~, or no 2, or a pass.

6. It is left to the Minister of the Interior to determine which individuals can visit and reside in the 2-km border strip or border zone and to record the same on their identity documents.

7. The officers of the Ministry of the Interior and the Ministry of People's Defense are allowed to enter and circulate in the 2-km border strip and the border zone in accordance with the procedure established by the Minister of the Interior.

8. Field work within the 2-km border strip is to be allowed as a rule from sunrise to sunset. In cases of exceptional need (accident, rendering help, crop harvest, etc) night work in the fields will be allowed in accordance with the procedure established by the Ministry of the Interior.

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9. The Ministry of the Interior is allowed, in the case of a complicated border situation, after coordination with the local party and administrative organs, to introduce a curfew hour within the 24-hour day for determined areas in the 2-km border strip and border zone.

10. The settling of individuals coming from the interior of the country, in the border zone and the 2-km border strip is to be carried out in accordance with the established orders of the people's soviets, after coordination with the Ministry of the Interior.

11. Diplomatic representatives of foreign states, and members of foreign government delegations may visit the border zone with passes issued by the Ministry of the Interior.

Any foreign citizen permanently or temporarily residing in Bulgaria may visit the border zone and the 2-km border strip with a pass issued to him by the Ministry of Foreign Affairs.

12. The chiefs of railroad stations, automobile stations, and port and shipping administrations are forbidden to issue railroad, automobile, and ship tickets to passengers traveling to the 2-km border strip and border zone without requiring to see passports bearing stamp no 1 or no 2, or a pass.

The Ministry of the Interior must present to the Ministry of Transportation a list of railroad stations, stops, and river and sea ports for the issuance of traveling tickets to which it will be required that travelers show passes, or passports bearing stamp no 1 or no 2.

13. Construction of various new projects, carrying out of surface or underground projects, and taking of photographic pictures are to be undertaken only with the agreement of the Ministry of People's Defense and the Ministry of the Interior.

14. Fishing by state and cooperative organizations and private individuals in the Black Sea and the Danube River is permitted at all times during the 24-hour day.

The exit of sailing vessels to sea (the river) for fishing, coastal sailing and beyond-the-border sailing will be allowed by permission of the chief of the border subdivision concerned after presentation of the following documents.

(a) For fishing: identification passport, pass, fishing licence valid for the current year, the vessel's sailing permit (certificate of nationality), and permit to carry weapons -- only for the hunters of the dolphin fishing crews.

(b) Shore sailing (coastal): identity passport, seamen's book, list of the ship's crew, ship's certificate of nationality, and sailing permit (licence).

(c) Sailing across the border: list of the ship's crew and seamen's passports.

15. All motor and rowing boats belonging to state, cooperative and sporting organizations, and to private individuals must, to be eligible to operate on the border rivers and the Black Sea, be registered with the Ministry of the Interior and carry a special number issued to them by the Ministry of the Interior, which is to be placed on both sides of their prows.

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16. The port authorities, together with the organs of the Ministry of the Interior, must establish special wharfs for the wharfing of rowing boats along the shores of the rivers or the sea. All boats tied up at wharfs must be chained and secured by a lock, and must be guarded at night by watchmen appointed by the fishing communities.

The boats' cars must be kept in determined places, under protection.

17. Individuals who violate the established procedure of entering and remaining within the 2-km border strip and the border zone, or the procedure for sailing on border rivers and the Black Sea, will be detained by the organs of the Ministry of the Interior, and will be held administratively and judicially responsible.

18. The unexchanged and uncompensated lands of individual farmers, farm workers' cooperatives, and other expropriated by the decree of the Council of Ministers of 10 July 1950, in cases when they cannot be freed and returned for cultivation to their owners, must be exchanged for areas freed by the decree of the Council of Ministers of 17 May 1954, or with other free lands of the state land fund.

19. The Ministry of Agriculture, through the TPS (Trudova Pomezlena sobatvenost, Land Ownership) commissions, will complete these exchanges by the end of 1956 against presentation, by the respective people's soviets, and the Ministry of the Interior, of the following documents. Sketch and property report with data as to name of the owner, his residence, type of crop on the property, and size, location and boundaries of the expropriated property. For the property which cannot be exchanged, the owners are to be compensated by the Ministry of the Interior.

20. The Minister of the Interior is to approve instructions for the application of this decree.

21. This decree replaces the decrees of the Council of Ministers of 10 July 1950, 27 December 1951, and 17 May 1954, whereby the frontier territory administration of the Bulgarian People's Republic was established.

B-1743

A. Yugov, Chairman of the
Council of Ministers
At. Voynov, Secretary to the
Council of Ministers

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